

The ARPA Computer Network Working Group met at UCLA the evening of November 16, 1967. In attendance were:

B. Boehm (RAND)
G. Buck (UCSB)
L. Kleinrock (UCLA)
✓ L. Roberts (ARPA)
E. Shapiro (SRI)
R. Taylor (ARPA)
B. Wessler (ARPA)

Three topics were discussed:

- (1) objectives of the Working Group (see attachment 1)
- (2) a report outline (see attachment 2)
- (3) functional characteristics (see attachment 3)

Work assignments suggested by members of the group were:

	<u>Report</u>	<u>IMP Functional Char.</u>
Kleinrock		I
Roberts	V, VI, VIII	
Shapiro	I, II, III, IX	
Wessler		II
ARPA	VII	
Group	IV	

Members of the group who can contribute to topics assigned to others were urged to assist the latter by contributing ideas, etc. Written material should be distributed to all members of the group as it becomes available. Wessler is to be called by all on or before November 30 to provide him with a progress report. A target date for completion of the draft report is still January 31, 1968.

330-71-11647

Box I

ARPA Computer Network

Proposed Objectives of the Working Group

1. To develop a draft report covering the IMP software and IMP hardware.
2. To suggest acceptance test criteria and procedures.
3. To suggest communication network configurations.
4. To suggest evaluation criteria to be applied to responses.
5. To recommend a development schedule.

Suggested Outline of Working Group Report

- I. Introduction
 - A. Network objectives and uses
 - B. Host-IMP relationship
 - C. Host types and locations
 - D. Communication features
- II. Scope
 - A. Delivery of "basic IMP" hardware and basic IMP programs
 - B. Installation of IMP's, to work in conjunction with customer-supplied communication facilities and customer-supplied host computers
 - C. Delivery of documentation (including tutorial meetings) pertaining to basic IMP programs, hardware, communications, and site installations
 - D. Conduct of acceptance tests
 - E. Network operation and maintenance.
- III. Description of IMP boundary conditions
 - A. IMP-host interface
 - B. IMP-communication facility interface
 - C. Host-host traffic characteristics
 - D. Response time requirements
 - E. Communication network features
 - F. Host computer features
- IV. Functional description of IMP
- V. Schedule
 - A. Network growth sequence
 - B. Acceptance testing
 - C. Report to users (including tutorial meetings)
 - D. Documentation delivery
- VI. Acceptance test
 - A. Scope and nature of test
 - B. Evaluation and acceptance criteria
 - C. Customer preparations and related contingency plans

VII. Documentation and reporting

A. Tutorial meetings

B. Final documentation

1. Scope

2. Formats

VIII. Network maintenance and operation

IX. Proposed format

IMP Functional Characteristics

- I. Software
 - A. Store and forward
 - Routing, error checking, retransmission,
 - acknowledgements, memory channel maintenance
 - B. Interface to host
 - Header formation, acknowledgement (host)
 - C. IMP directed messages
 - D. Fault recovery
- II. Hardware
 - A. Standard host interface (serial)
 - B. Dataphone interface
 - C. Cyclic redundancy creation and checking
 - D. General purpose processor
 - E. ASCII transparent character
 - F. No tape, discs, drums, cards on the basis
 - of reliability
 - G. Hardware loader vs tape reader